

- Fig. 3. Inferior ventral bristle. $\times 90$ diam.
 Fig. 4. Developing bristle of the same form. $\times 210$ diam.
 Fig. 5. Dorsal bristle of *Malmgrenia Whiteavesii*. $\times 700$ diam.
 Fig. 6. Superior ventral bristle. $\times 700$ diam.
 Fig. 7. Inferior ventral bristle in chloride of calcium. $\times 700$ diam.
 Fig. 8. One of the longer dorsal bristles of *Eupolynoë occidentalis*. $\times 350$ diam.
 Fig. 9. One of the shorter dorsal bristles. $\times 350$ diam.
 Fig. 10. Superior ventral bristle of the same species. $\times 350$ diam.
 Fig. 11. Tip of another example. $\times 700$ diam.
 Fig. 12. Tip of one of the next series. $\times 350$ diam.
 Fig. 13. Tip of one of the inferior ventral bristles. $\times 350$ diam.
 Fig. 14. Dorsal bristle of *Polynoë gaspéensis*. $\times 350$ diam.
 Fig. 15. Tip of another, showing the blunt termination. $\times 350$ diam.

PLATE X.

- Fig. 1. Dorsal bristle of *Eupolynoë anticostiensis*. $\times 210$ diam.
 Fig. 2. One of the shorter forms. $\times 210$ diam.
 Fig. 3. Superior ventral bristle. $\times 210$ diam.
 Fig. 4. Inferior ventral bristle. $\times 210$ diam.
 Fig. 5. Dorsal bristle of *Nemidia* (?) *canadensis*. $\times 350$ diam.
 Fig. 6. Superior ventral bristle. $\times 350$ diam.
 Fig. 7. Tip of inferior ventral bristle. $\times 350$ diam.
 Fig. 8. One of the same seen from behind. $\times 350$ diam.
 Fig. 9. Dorsal bristle of *Nemidia* (?) *Lawrencii*. $\times 350$ diam.
 Fig. 10. Superior ventral bristle. $\times 350$ diam.
 Fig. 11. One of the lower ventral bristles. $\times 350$ diam.
 Fig. 12. Ventral bristle of *Polynoë gaspéensis*. $\times 350$ diam.
 Fig. 13. Tip of another, with slightly different characters. $\times 350$ diam.
 Fig. 14. Ventral bristle of *Leanira Yhleri* (?). $\times 350$ diam.

XXXV.—On the *Geodephagous Coleoptera* of New Zealand.

By H. W. BATES, F.L.S.

[Concluded from p. 246.]

Family Carabidæ.

Subfamily ANISODACTYLINÆ.

TRIPLOSARUS, nov. gen.

Corpus breviter oblongum, subdepressum. *Caput* pone oculos haud angustatum. *Mandibulæ* edentatæ, basi latæ, apice angustatæ et curvatæ. *Labrum* medio leviter emarginatum, angulis rotundatis. *Mentum* medio dente forti, acuto; lobis extus valde rotundatis, apice intus acutis; epilobiis haud conspicuis. *Ligula* oblonga, apice libera, recte truncata; paraglossis apice æque truncatis, longitudine et latitudine ligulæ æqualibus. *Thorax* transversim quadratus. *Elytra* apice obtuse rotundata, paulo sinuata; striola

scutellaris longa, inter strias primam et secundam posita. Tibiæ setosæ; anticæ extus 5-spinosæ.

♂. Tarsi quatuor anteriores articulis secundo ad quartum dilatatis, pedum anteriorum brevissimi, intermediorum longiores cordati; articulo quarto nullomodo lobato; palmis ut in *Anisodactylo* dense breviter setosis, planis; articulo primo triangulari, subtus nudo.

This genus differs from the other *Anisodactylinae* in the form of its head and mandibles, which resemble those of *Phorticosomus*, *Cratacanthus*, &c.; but the eyes are rather prominent; the suture separating the epistome from the forehead is very sharply impressed, and has a short deep frontal foveole near each end. The paraglossæ are lateral, and not placed behind the ligula, as in other genera of the group.

Triplosarus fulvescens, n. sp.

T. ochraceo-fulvus, subnitidus, capite thoraceque interdum æneo tinctus; thorace antice rotundato, postice modice angustato, angulis posticis obtusis, basi utrinque fovea lata, indistincte punctulata; elytris in utroque sexu sericeis; interstitiis planis, tertio postice unipunctato. Long. 4-4½ lin. ♂ ♀.

Harpalus novæ-zelandiæ, Castelnau, Trans. R. Soc. Vict. pt. ii. vol. viii. p. 194?

Castelnau's description applies to the species as far as it goes, except the size (5 lines). My specimens came from Mr. Henry Edwards (from Auckland?) and Mr. Fereday of Christchurch.

Lecanomerus latimanus, n. sp.

L. ovatus, piceo-fuscus, modice nitidus; partibus oris, antennis, pedibus, elytrorumque marginibus (postice dilatatis) fulvo-testaceis; thorace transversim quadrato, vix postice angustato, angulis posticis rotundatis, supra basi lævi haud foveato; elytris ovatis, convexis.

♂. Tarsi quatuor anteriores articulis secundo et tertio magnis, maxime dilatatis; secundo semicirculari; tertio paulo brevior, haud angustior; primo breviter triangulari; quarto brevissimo, lato, quam tertio paulo angustior, nullomodo lobato.

Long. 2½ lin. ♂.

The form of this curious insect is that of an *Oöpterus*, the elytra being ovate (much broader than the thorax) and convex; but the broad patelliform anterior and middle tarsi of the male, with their even, smooth brush-soles, show that it belongs to the Australian genus *Lecanomerus* (Chaud.). It agrees in all other generic characters with *L. insidiosus*; but the second tarsal joint is shorter and more semicircular, and the fourth is much broader. The elytra in the unique specimen are dark pitchy brown with fulvous lateral margins, not very well

defined, but widening much at the apex; there is no puncture on the third interstice, and there is a short scutellar striole between the first and second striæ. The margins of the ventral segments are more or less fulvous.

One example, from New Zealand. Obtained from the late Rev. Hamlet Clark's collection.

Hypharpax antarcticus.

Harpalus antarcticus, Castelnau, *l. c.* p. 193.

Christchurch (*Mr. Fereday*).

Scarcely belongs to *Hypharpax*, the hind tibiæ of the male not being arcuated; in facies and in the long fine bristles on the innerside of the tibiæ, with a row of shorter spines on the outer side, it resembles that genus. Four joints of the four anterior tarsi of the male are dilated, and smooth, brush-like, beneath.

Hypharpax australasiæ.

Harpalus australasiæ, Dej. Sp. Gén. iv. p. 386.

Hypharpax australis.

Harpalus australis, Dej. *l. c.* p. 385.

Both these species are found in New Zealand, according to Redtenbacher.

Although only the female in each case was described by Dejean, I think they belong to the genus *Hypharpax*.

Subfamily *HARPALINÆ*.

EUTHENARUS, nov. gen.

Gen. *Tachycello* similis. *Palpi* robusti, glabri; articulo terminali fusiformi, versus apicem attenuato, apice leviter truncato. *Antennæ* robustæ; articulo undecimo multo longiore, crasso. *Mentum* parvum, emarginatione semicirculari, dente mediano prominulo acuto. *Ligula* cornea, oblonga, apice libera bisetosa; paraglossis ipsa duplo latioribus et multo longioribus, apice late rotundatis.

♂. *Tarsi* quatuor anteriores articulis quatuor valde dilatatis: primo triangulari; secundo ad quartum brevissimis et latissimis; quarto bilobo; omnibus laciniis argenteis longissimis vestitis.

The insects on which this distinct new genus is founded resemble the *Bradycelli* and small *Stenolophi* of the northern hemisphere, but are widely different in the clothing of the four dilated palms of the male. This is unlike either the squamæ arranged in pairs of the true Harpalidæ, or the even brush of short vertical hairs of the *Anisodactylinæ*, but con-

sists of a few very long linear hair-scales set obliquely on the broad palms and forming a broad fringe to the feet. The paraglossæ also differ from those of the *Harpali* in being very broad, not tapering to the apex, but broadly rounded. The frontal foveæ of the head form short striæ curving to the inner margin of the eye. The thorax is quadrate. The elytra are obtuse at the apex, with a strong sinuation; the scutellar striole is rudimentary between the first and second striæ; the third interstice has one puncture. The males have a hairy fovea in the middle of the first ventral segment, like the *Tachycelli*.

Euthenarus brevicollis, n. sp.

E. oblongus, fusco-æneus; elytris subcupreis; antennis basi, palpis apice, genibusque piceo-rufis; thorace postice paululum angustato, angulis posticis obtusis fere rotundatis, fovea utrinque lata sparsim punctulata; elytris acute striatis, interstitiis planis. Long. $2\frac{3}{4}$ lin. ♂ ♀.

Lake Coleridge; under stones in dry lagoon (*C. M. Wakefield, Esq.*).

Immature specimens have testaceous-yellow legs and pale under surface of body; but the dark brassy colour of the head and thorax and cupreous elytra remain in all the numerous individuals sent. The hind angles of the thorax are distinct in some examples and perfectly rounded off in others; the basal foveæ also vary in the amount of punctuation, which is always rather coarse.

Euthenarus puncticollis, n. sp.

E. oblongus, fusco-piceus æneo tinctus vel cupreo-æneus; antennis basi, palpis basi et apice, pedibus (femoribus interdum exceptis) rufo-piceis; thorace longiore, postice subsinuatum paulo angustato, angulis posticis fere rectis, fovea basali grosse punctata; elytris apice fortiter sinuatis, subtruncatis. Long. $2\frac{3}{4}$ lin. ♂ ♀.

Apparently distinct from *E. brevicollis*, although similar in size and coloration. It is decidedly slenderer, with longer thorax, the posterior narrowing of which is slightly incurved and the hind angles more distinct. The general colour is less metallic; and the side rims of the thorax are pale, which is sometimes the case with *E. brevicollis*. A better distinction is the more transverse and stronger sinuation of the apex of the elytra, the edges external to the sinuation being more flattened out; they are finely and sharply striated in the same manner.

Auckland. Several examples from Mr. Lawson and Mr. H. Edwards.

Subfamily *TRECHINÆ*.

Oöpterus rotundicollis, White, Voy. Ereb. & Terr., Ins. p. 6.
Bay of Islands.

Oöpterus lævicollis, Bates, Entom. Monthly Mag. vol. viii.
1871, p. 14.

New Zealand; precise locality unknown.

Two other species of this genus are described from the Falkland Islands.

It is very easy to confound this genus with *Tropopterus*, belonging to a quite different subfamily, the resemblance in general form between the two being very great.

Subfamily *BEMBIDIINÆ*.

Tachys antarcticus, n. sp.

T. oblongo-ovatus, convexus, testaceo-rufus, nitidus, palpis pedibusque flavo-testaceis; capite foveis frontalibus magnis, profundis, interspatio elongato, convexo: thorace subcordato, lateribus antice valde rotundatis, post medium sinuatim angustato, angulis posticis productis acutis; supra antice convexo, postice transversim depresso, utrinque foveolato, lævi: elytris ovatis, humeris rotundatis utrinque striis 3 prope suturam, fortiter impressis, subpunctatis; interstitio tertio bipunctato. Long. $\frac{3}{4}$ lin.

In form intermediate between *T. hæmorrhoidalis*, Dj., and *T. globulus*, Dj. As convex as the latter, but much more slender, the thorax especially being narrower (much narrower than the elytra), more cordiform, and the elytra more ovate and rounded at the shoulders. The antennæ are wanting in both my specimens.

Auckland? (*H. Edwards, Esq.*).

Bembidium (Peryphus) maorinum, Bates, Entom. Monthly Mag. iv. p. 56 (1867).

Christchurch (*Mr. Fereday*).

Bembidium (Peryphus) charile, Bates, l. c. p. 79.

Christchurch (*Mr. Fereday*).

I have not again received either of the above species. They form a distinct section, near *Peryphus*, distinguished by the setiferous punctures of the fifth as well as the third interstice of the elytra. In form they closely resemble the European

B. eques; but the thorax is smaller and still more cordate (similar to that of the *Lopha* section). The frontal furrows are deep, and reach to the level of the hind margin of the eyes. The fovea of the hind angles of the thorax has no carina exterior to it. The anterior tarsi of the male have only the basal joint dilated, parallelogrammical, as in *Peryphus eques*.

Bembidium rotundicolle, n. sp.

B. nilotico similis, cupreo-æneum, nitidum; antennis basi pedibusque piceo-rufis; elytris utrinque versus apicem, ipsoque apice flavo-testaceis; thorace fortiter rotundato, basi angusta, marginibus angustis, postice nullomodo explanatis, angulis posticis vix conspicuis, fovea parva juxta angulum lævi; elytris punctato-striatis, extus et apice minus impressis, interstitiis paulo convexis, tertio bipunctato. Long. $1\frac{3}{4}$ –2 lin. ♂.

♂. Tarsi antici articulis duobus dilatatis, apice obliquis et fortiter intus productis.

Differs from the section to which *B. niloticum* belongs by the very narrow margins to the thorax, not explanated behind, and with obtuse hind angles; the sides of the thorax are very strongly rounded, but the base is much narrower than the apex; the apical angles are not at all conspicuous.

Lake Coleridge; under stones in a dry lagoon (*C. M. Wakefield, Esq.*).

Subfamily *ACTENONYCHINÆ*.

Actenonyx bembidioides, White, l. c. p. 2 (1846).

Sphallax peryphoides, Bates, Ent. Monthly Mag. iv. p. 56 (1867).

Christchurch (*R. W. Fereday, Esq.*).

White's description omits all the essential characters of this curious Carabid, and is so vague that there are no means of identifying it without reference to the type. I have seen a specimen so named in the British Museum, which quite agrees with *Sphallax peryphoides*. The extraordinary form of the ligula, and other characters, necessitate the formation of a new subfamily for the insect, which will range near the *Odecanthineæ*.

Subfamily *SCOPODINÆ*.

Scopodes fossulatus.

Dromius (!) *fossulatus*, Blanch. Voy. Pôle Sud, iv. p. 9, t. iii. f. 16.

Periblepusa elaphroides, Redtenb. Reise Novara, Col. p. 21, t. i. f. 9.

Blanchard's description accords exceedingly well with a species apparently common at Auckland, with the exception

that no mention is made of the prominent eyes; this omission, however, is supplied to some extent by his figure.

Auckland. Both from Mr. H. Edwards and Mr. Lawson.

A well-preserved specimen, rather larger than usual, agrees exactly with Redtenbacher's description.

Scopodes elaphroides.

Helæotrechus elaphroides, White, *l. c.* p. 5, t. i. f. 5.

Larger than the preceding ($2\frac{1}{2}$ lines), and differing besides in being "deep black," *S. fossulatus* being silky æneous; the legs are "yellow, with middle of femora and the tips with a brownish band."

Scopodes aterrimus, n. sp.

S. magis elongatus, gracilior, toto insecto sericeo-niger; thorace angustiore, ab angulo anteriore usque basin recte angustato, supra subtiliter strigoso sed nitido; elytris striis latis paulo undulatis, impunctatis, foveis tribus magnis prope suturam alterisque irregularibus versus apicem. Long. $2-2\frac{1}{4}$ lin.

Distinguished from *S. fossulatus* and from all the Australian species known to me (nine in number) by the form of the thorax—rather narrow, with slightly prominent antero-lateral angles, and without trace of posterior angle, the lateral margin being rounded off to the base; the surface is rather faintly transversely strigose and shining.

Two examples from Mr. H. Edwards (Auckland), and one from Christchurch (Mr. Fereday).

Subfamily *COPTODERINÆ*.

Agonochila binotata.

Lebia binotata, White, *l. c.* p. 2.

Gomelina binotata, Blanch. Voy. Pôle Sud, iv. p. 12 (1853).

Agonochila binotata, Chaud. Bull. Mosc. (1848).

Coptodera (*Agonochila*) *antipodum*, Bates, Ent. Monthly Mag. iv. (1867), p. 78.

Sarothrocrepis binotata, Redtenb. Reise Novara, Coleop. p. 7.

Christchurch.

Subfamily *CALLEIDINÆ*.

Demetrída lineella, White, Zool. Ereb. & Terr., Ins. p. 2, t. i. f. 3.

Port Nicholson.

Demetrída nasuta, White, *l. c.* p. 2.

Auckland (*H. Edwards, Esq.*).

Demetrida picea.

Demetrida picea, Chaud. Bull. Mosc. 1848, i. p. 77; Ann. Soc. Ent. Belg. tome xv. p. 195 (1872).

Cymindis australis, Hombr. & Jacq. Voy. Pôle Sud, Zool. t. i. f. 7 (1842?).

Cymindis Dieffenbachii, White, Dieffenb. New Zeal. vol. ii. p. 273 (1843); Blanch. Voy. Pôle Sud, Zool. iv. (1853).

Christchurch (*Mr. Fereday*).

Chaudoir's name must remain for this species, according to the rule that the first unoccupied name accompanied by a description takes the priority. The figure in the 'Voyage au Pôle Sud' was published eleven years before the description, and was erroneously lettered *C. australis*, not being the *C. australis* of Dejean. Blanchard himself corrected this error in 1853; but long before that date Chaudoir's excellent description had appeared. White's name was simply given (without description) to the above-mentioned figure, in place of the erroneous *C. australis*.

Species of doubtful position.

Pedalopia novæ zelandiæ, Castelnau, l. c. p. 154.

XXXVI.—*Remarks on Mr. H. J. Carter's Letter to Prof. King on the Structure of the so-called Eozoon canadense.* By WILLIAM B. CARPENTER, M.D., LL.D., F.R.S., Corresponding Member of the Institute of France.

THE well-merited reputation which Mr. Carter has gained by his researches on *Sponges* and *Foraminifera* will doubtless give to his decided expression of opinion *against* the Foraminiferal character of the (so-called) *Eozoon canadense* a very considerable weight with those naturalists who regard the question as still *sub judice*.

Had Mr. Carter (whose additions to our knowledge of the minute structure of certain types of *Foraminifera* are estimated by no one more highly than by myself) pronounced this opinion after a careful study of what has been written *in favour* of the Foraminiferal character of *Eozoon*, and after an examination of the *pièces justificatives* therein referred to, I should have respected it, however different from my own, as that of an able investigator who has the fullest right both to form and to publish his judgment, and should not have troubled the scientific public with any further discussion of the question at issue.



Bates, Henry Walter. 1874. "XXXV.—On the Geodephagous Coleoptera of New Zealand." *The Annals and magazine of natural history; zoology, botany, and geology* 13, 270–277. <https://doi.org/10.1080/00222937408680859>.

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